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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/145,987	09/03/1998	YUKIKO NAKANISHI	2224-0142P	6638

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EXAMINER	
MAIER, LEIGH C	

ART UNIT	PAPER NUMBER
1623	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/145,987	NAKANISHI ET AL.	
	Examiner	Art Unit	
	Leigh C. Maier	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,18,20,23,26 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,18,20,23,26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/2/04, 9/21/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 1-13, 18, 26, and 27 have been amended. Claims 14-17, 19, 21, 22, 24, and 25 are canceled. Claims 1-13, 18, 20, 23, 26, and 27 are pending. Any objection or rejection not expressly repeated has been withdrawn. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant is reminded that all currently amended claims must be marked as such. Claim 27 has been amended but has the status qualifier "previously presented."

Claim Rejections - 35 USC § 112

Claims 1, 4-10, 26, and 27 are again rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As noted in the previous Office action, claim 1 is recited as a compound claim. However, feature (ii) recites the inclusion of another component. This conflict renders the claims vague and indefinite. In remarks filed December 27, 2004, Applicant contends that this terminology is proper because "cellulose acetate has a sulfonic acid group which is neutralized with a basic metal component, and accordingly the terminology 'cellulose acetate' in the present context is well known and accepted in the relevant art as including a compound comprising a metal ... component." If it were only the metal ion, the entity would be considered a salt and would be accepted without objection. However, feature (ii) requires the addition of a second component,

an acid. It is important to know what is included and what is *excluded* from the claim. For example, in discussing the art rejections, Applicant states that "UENISHI fails to teach the cellulose acetate containing the polyvalent acids, since UENISHI add [sic] the polyvalent acids to the dope." The claim clearly requires the inclusion of an acid, but there is no transitional phrase such as "consisting of" that would limit the components in the product, so perhaps the organic solvent in the dope would be allowed also.

Claim Rejections - 35 USC § 102

Claims 1-10, 18, 26, and 27 are again rejected under 35 U.S.C. 102(b) as being anticipated by UENISHI et al (JP 2-251607). Because the patent is in Japanese, the examiner relies on an English translation of the document, also of record. Citations refer to the translation. CAMPBELL et al (US 3,755,297) is also cited to support inherency of recited limitations. Claim 11 has been amended to a composition comprising the cellulose acetate having the same limitations as recited in claim 1. Amended claims 11 and 12, drawn to a composition, are included in this rejection.

Applicant's arguments filed December 27, 2004 have been fully considered but they are not persuasive.

Applicant argues that given the amount of acid taught by UENISHI, that the pH value of the dope would be lower than 4.5. However, there is no pH limitation for the dope (which is an organic solution anyway) that is prepared. Applicant states a willingness to submit a declaration showing that a slurry pH value for UENISHI's cellulose acetate. In view of this, it appears that Applicant's argument is that a cellulose acetate in combination with 0.5 or more equivalents of

acid would have a pH of less than 4.5 when prepared as a slurry. The examiner would consider evidence supporting this argument.

Applicant further argues that "UENISHI is silent [regarding] the relationship between free carboxyl groups and the sulfonic acid groups, which sulfonic acid groups form metal salts preferentially." However this activity is based on inherent chemical reactivity, so it will happen regardless if the art recognizes it or not.

Applicant also contends that "UENISHI fails to teach the cellulose acetate containing the polyvalent acids, since UENISHI add [sic] the polyvalent acids to the dope." However, the reference also teaches fibers prepared from said dope. This product would appear to meet the limitation of feature (ii).

It is noted that features (i)-(iii) are listed in the alternative—the claim requires only one. Applicant's arguments appear to overlook feature (iii). This feature does not require the addition of an acid or any particular configuration of the carboxyls. As was discussed in the previous Office action, the reference is directed to the minimization of metal ions, but is silent regarding the actual content of said ions. Since the Office does not have the facilities for preparing the claimed materials and comparing them with prior art inventions, the burden is on Applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).

Claims 1-3, 13, 18, 20, 23, and 27 are again rejected under 35 U.S.C. 102(b) as being anticipated by KIYOSE et al (WO 96/30412), as set forth in the previous Office action. Because the reference is in Japanese, the equivalent reference, US 5,914,397*, is used to indicate its contents. CAMPBELL et al (US 3,755,297) is also cited to support inherency of recited limitations. Claim 11 has been amended as set forth above. Amended claims 11 and 12 drawn to a composition are included in this rejection.

*It is noted that in the previous Office action, US 5,663,310 was said to the US equivalent. However, the passages cited clearly refer to US 5,914,397, and this was the reference provided to Applicant. The examiner regrets any confusion, but from Applicant's remarks, it appears that the basis of the rejection was clear.

Applicant's arguments filed December 27, 2004 have been fully considered but they are not persuasive.

Applicant argues that the reference "teaches cellulose triacetate having a high acetylation degree which is obtained by acetylation without neutralization with a basic metal, thus the reference fails to teach cellulose acetate containing metals." The examiner agrees, but the claim does not require the presence of a metal. Feature (iii)—again, these features are presented in the alternative—recites "... such that the total content of the ... metal in 1 gram of the cellulose acetate is 5.5×10^{-6} equivalent or less in terms of ion equivalent." Therefore, the claim requires that metal be present in an amount covering the range of 5.5×10^{-6} equivalent or less. This range includes zero.

Claims 1-3, 11, 12, 18, 20, 23, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by YABE et al (JP 57-182737).

YABE teaches the preparation of cellulose acetate using a sulfuric acid catalyst and neutralized with alkaline earth metal salts. The products are washed with acetic acid to minimize residual metal content. The reference further teaches the preparation of a dope in a chlorinated solvent, from which a film is cast. See abstract and example.

Claim Rejections - 35 USC § 103

Claims 1-13, 18, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over UENISHI et al (JP 2-251607). The EPSTEIN reference has been dropped because the claims have been amended, so that a slurry product is not required.

UENISHI teaches as set forth above. The reference does not exemplify the degree of acetylation recited in claim 13.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to prepare yarn from the cellulose acetate/carboxylic acid product disclosed by UENISHI by any known method because the reference had taught that the product has this utility. Finally, given the teaching of UENISHI, it would be within the scope of the artisan to minimize the amount of alkali/alkaline metal ion, and in doing so would optimize the amount of the carboxylic acid through routine experimentation. It would further be within the scope of the artisan to optimize the degree of acetylation through routine experimentation.

Applicant's arguments filed December 27, 2004 have been fully considered but they are not persuasive. Applicant adds no arguments not addressed above.

Claims 1-3, 13, 18, 20, 23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over KIYOSE et al (WO 96/30412). Because the reference is in Japanese, the equivalent reference, US 5,914,397*, is used to indicate its contents. *See note above. Claims 11 and 12 are included in this rejection for reasons set forth above.

KIYOSE teaches as set forth above. It is noted that it does not appear that the reference explicitly states that the solution comprising the cellulose acetate product in methylene chloride/ethanol is the one that is used to prepare the films. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select this solvent system for casting a film. In the absence of unexpected results, the artisan would be motivated to select a halogenated hydrocarbon because these solvents are expressly suggested at col 5, lines 46-50 and as noted above, such a solution is disclosed.

Applicant's arguments filed December 27, 2004 have been fully considered but they are not persuasive. Applicant adds no arguments not addressed above.

Claims 1-3, 11-13, 18, 20, 23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over YABE et al (JP 57-182737).

YABE teaches as set forth above. The reference is silent regarding the degree of acetylation of the exemplified products. However, the reference suggests the preparation of products having a degree of acetylation of 54-62%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to prepare a product according to YABE for the art-disclosed utility of

preparing films. In the absence of unexpected results, it would be within the scope of the artisan to optimize the degree of acetylation with routine experimentation.

Applicant concludes with a section discussing purported unexpected results.

Applicant states that the larger amount of acid used by UENISHI accelerates hydrolysis of the cellulose acetate. This statement is unsupported by evidence.

Applicant states that KIYOSE uses a large amount of sulfuric acid, so that resultant cellulose acetate has a high concentration of sulfonic acid groups and hydrolysis would be accelerated. First of all, there is no limitation regarding the amount of residual sulfuric acid. Also, there is no evidence of improved stability.

Applicant states that the references fail to teach improvement of film-releasability. It is noted that the claim drawn to a method for improving the releasability of a film comprises only the step of casting a dope on a support. Therefore, simply casting the dope meets the requirement of the claim.

Finally, Applicant notes that the examples in the specification demonstrate unexpected results for a product having some amount of acid compared with a product having no acid. However, UENISHI teaches the addition of acid. It would appear the more apt comparison would be a comparison between the amount of acid required by the invention and the amount required by UENISHI.

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on August 2, 2004 and September 21, 2004 prompted the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). The revised rejection is also based on Applicant's amendment.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Examiner's hours, phone & fax numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (571) 272-0656. The examiner can normally be reached on Tuesday, Thursday, and Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson (571) 272-0661, may be contacted. The fax number for Group 1600, Art Unit 1623 is (703) 872-9306.

Visit the U.S. PTO's site on the World Wide Web at http://**www.uspto.gov**. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more.

Leigh C. Maier

Leigh C. Maier
Primary Examiner
March 3, 2005